

OLD DRAWINGS

Gag_AF110965_BW_mod

ATGGGCGCCCGGCCAGCATCCTGCGCGEGGCAAGCTGGACGCCCTGGAGCGCATCCGCC
TGCGCCCCGGCGCAAGAAGTGTACATGATGAAGCACCTGGTGTGGGCCAGCCGAGCT
GGAGAAGTTCGCCCTGAACCCCGCTGCTGGAGACCAGCGAGGGCTGCAAGCAGATCATC
CGCCAGCTGCACCCCGCCCTGCAGACCGGCAGCGAGGGACTGAAGAGCCTGTTCAACACCG
TGGCCACCCCTGTACTGCGTGCACGAGAAGATCGAGGTGCGACACCAAGGAGGCCCTGGA
CAAGATCGAGGAGGAGCAGAACAAAGTGCAGCAGAAGATCCAGCAGGCCAGGCCGAC
AAGGGCAAGGTGAGCCAGAACTACCCCATTGTGCAGAACCTGCAGGGCCAGATGGTGCACC
AGGCCATTAGCCCCCGCACCCCTGAACGCCTGGGTGAAGGTGATCGAGGAGAAGGCCCTCAG
CCCCGAGGTGATCCCCATTGTTCACCGCCCTGAGCGAGGCCACCCCGAGGACCTGAAC
ACGATGTTGAACACCGTGGCGGCCACAGGCCATGCAGATGCTGAAGGACACCATCA
ACGAGGAGGCCGCCAGTGGGACCGCGTGCACCCGTGCAGGCCGCCATGCCCG
CCAGATGCGCGAGCCCCCGGGCAGCGACATGCCGGCACCACGACCCCTGCAGGAGCAG
ATCGCCTGGATGACCAGAACCCCCCATCCCCGTGGCGACATCTACAAGCGGTGGATCA
TCCTGGCCTGAACAAGATCGTGGATGTACAGCCCCGTGAGCATTGGACATCAAGCA
GGGCCCCAAGGAGCCCTCCCGCACTACGTGGACCGCTTCTCAAGACCCCTGCAGGCCAG
CAGAGCACCCAGGAGGTGAAGAACTGGATGACCGACACCCCTGCTGGTGCAGAACGCCAAC
CCGACTGCAAGACCATCCTGCGCGCTCTGGCCCCGGGCCAGCCTGGAGGAGATGAC
CGCCTGCCAGGGCGTGGCGGCCAGGCCACAAGGCCCGTGCAGGCCAGGCCATGAGC
CAGGCCAACACCCAGCGTGTGATGCAGAAGAGCAACTTCAAGGGCCCCGGCGATCGTCA
AGTGCTTCAACTGCGCAAGGAGGGCCACATGCCCGCAACTGCCCGCCCCCGCAAGAA
GGGCTGCTGGAAGTGCAGCAAGGAGGGCCACAGATGAAGGACTGCACCGAGCGCAGGCC
AACTTCTGGCAAGATCTGGCCAGCCACAAGGGCGCCCCGGCAACTTCTGCAGAGCC
GCCCGAGCCCACCGCCCCCGGCCAGAGCTTCCGCTTCAGGAGACCACCCCGGCCA
GAAGCAGGAGAGCAAGGACCGCGAGACCCCTGACCGCCTGAAGAGCCTGTTGGCAACGAC
CCCTGAGCCAGTAA

Figure 1

Gag_AF110967_BW_mod

ATGGGCGCCCGCGCCAGCATTCTGCAGCGAGAAGCTGGACAAGTGGAGAAGATCCGCC
TGCAGCCCCGGCGCAAGAACGACTACATGCTGAAGCACCTGGTGTGGGCCAGCCGAGCT
GGAGGGCTTCGCCCTGAACCCCGGCCTGCTGGAGACCAGCCGAGGGCTGCAAGCAGATCATG
AAGCAGCTGCAGCCGCCCTGCAGACCCGGCACCGAGGAGCTGCCAGCCTGTACAACACCG
TGGCCACCCCTGTACTGCGTGCACGCCGGCATCGAGGTCCGCACACCAAGGAGGCCCTGGA
CAAGATCGAGGAGGAGCAGAACAAAGTCCCAGCAGAACAGGCCAGGAGGCCAAGGAGGCCGAC
GGCAAGGTGAGCCAGAACTACCCCATCGTCAGAACCTGCAGGGCCAGATGGTGCACCAGG
CCATCAGCCCCCGCACCCCTGAACGCCCTGGTGAGGTGATCGAGGAGAACGCCCTCAGCCC
CGAGGTGATCCCCATGTTACCGCCCTGAGCGAGGGGCCACCCCGAGGACCTGAACACG
ATGTTGAACACCGTGGCGGCCACCAGGCCATGCAGATGCTGAAGGACACCATCAACG
AGGAGGCCGCCAGTGGGACCGCCTGCACCCGTGCAGGCCGGCCACCCCGAGGACCTGAACACG
GATGCGCGACCCCGCGCAGCGACATGCCGGGCCACCAGCACCCCTGCAGGAGCAGATC
GCCTGGATGACCAGCAACCCCCCGTGCCTGGCGACATCTACAAGCGGTGGATCATCC
TGGGCCTGAACAAGATCGTGGATGTACAGCCCCGTGAGCATTGGACATCCGCCAGGG
CCCCAAGGAGCCCTCCGCACTACGTGGACCGCTTCTCAAGACCCCTGCCGCCAGCAG
GCCACCCAGGACGTGAAGAACTGGATGACCGAGACCCCTGCTGGTGCAGAACGCCAACCCG
ACTGCAAGACCATCCTGCGCCTCTGGCCCCGGGCCACCCCTGGAGGAGATGACCGC
CTGCCAGGGCGTGGCGGCCACAGGCCGTGCTGGCGAGGCCATGCCAG
GCCAACAGCGTGAACATCATGATGCAGAACGAGCAACTCAAGGGCCCCGGCGAACGTCA
AGTGCTTCAACTGCGCAAGGAGGGCACATGCCAAGAACTGCCGCCGGCAAGAA
GGGCTGCTGGAAGTGCAGCAAGGAGGGCACCAAGATGAAGGACTGCACCGAGGCCAGGCC
AACTTCCCTGGCAAGATCTGGCCAGCCACAAGGGCCGGCAACTTCCCTGCAGAAC
GCAGCGAGCCCGCCGCCACCGTGCCTGCCACCGGCCGGCGAGAGCTTCCGCTTGA
GGAGACCACCCCGCCCCCAAGCAGGAGGCCAAGGACCGCGAGGCCCTACCGCGAGGCCAG
ACCGCCCTGCGCAGCCTGTTGGCAGCGGCCCTGAGCCAGTAA

Figure 2

Fig. 3

Env_AF110968_C_BW_opt

--> signal peptide (1-81)
ATGCGCGTATGGGCATCCTGAAGAACTACCAGCAGTGGTGGATGTGGGCATCCTGGGCTTCTGGATGCTGATCA
\\--> gp120/140/160 (82)
TCAGCAGCGTGGTGGCAACCTGTGGGTGACCGTGTACTACGGCGTGCCGTGGAAGGAGGCCAAGACCACCC
GTTCTGCACCAGCGACGCCAAGGCCTACGAGACCGAGGTGCACAACGTGTGGGCCACCCACGCCTGCGTCCCCACC
GACCCCAACCCCCAGGAGATCGTGTGGAGAACGTGACCGAGAACATTCAACATGTGGAAGAACGACATGGTGGACC
AGATGCACGAGGACATCATCAGCCTGTGGGACCAGAGCCTGAAGCCCTGCGTAAGCTGACCCCCCTGTGCGTGAC
CCTGAAGTGCCGCAACGTGAACGCCACCAACAACATCAACAGCATGATCGACAACAGCAACAAGGGCGAGATGAAG
AACTGCAGCTTCAACGTGACCACCGAGCTGCGCACCGCAAGCAGGAGGTGCACGCCCTGTTCTACCGCCTGGACG
TGGTGCCCTGCAGGGCAACACAGAACAGAGTACCGCCTGATCAACTGCAACACCAGCGCCATACCCAGGCCCTG
CCCCAAGGTGAGCTCGACCCCATCCCCATCCACTACTGCACCCCCGCCGGTACGCCATCCTGAAGTGCAACAAC
CAGACCTCAACGGCACCGGCCCTGCAACAAACGTGAGCAGCGTGCAGTGCAGGCCACGGCATCAAGCCCAGGTGA
GCACCCAGCTGCTGCTGAACGGCAGCCTGGCAAGGGCGAGATCATCATCCGAGCGAGAACCTGGCAACAAACGC
CAAGATCATCATCGTGCAGCTGAACAAAGCCGTGAAGATCGTGTGCGTGCAGGCCACAAACAACACCCGCAAGAGC
GTGCGCATCGGCCCCGGCAGACCTCTACGCCACCGCGAGATCATGGCGACATCCGCCAGGCCTACTGCATCA
TCAACAAGACCGAGTGGAACAGCACCCCTGCAAGGGCGTGAAGAACAGCTGGAGGAGCATTCAAGAACAGGCAT
CAAGTTGAGCCCAGCAGCGCGGCGACCTGGAGATCACCAACCCACAGCTTCAACTGCCCGGGAGTTCTTAC
TGCGACACCAGCCAGCTGTTCAACAGCACCTACAGCCCCAGCTCAACGGCACCGAGAACAGCTGAACGGCACCA
TCACCATCACCTGCCGCATCAAGCAGATCATCAACATGTGGCAGAACGGTGGCCGCATGTACCCCCCCCCAT
CGCCGGCAACCTGACCTGCGAGAGCAACATCACCGCCCTGCTGCTGACCCCGACGGCGAACAGCCGCCAAC
GACACCGAGATCTCCGCCCCGGCGCGACATGCGCACAACTGGCGAACAGAGCTGTACAAGTACAAGGTGG
gp120(1512) <-\\-->(1513) gp41
TGGAGATCAAGCCCCCTGGCGTGGCCCCCACCAGAGGCCAAGCGCCGCGTGGAGCGCGAGAACGGCGCCGTGG
CATCGCGCCGTGTTCTGGCTTCCCTGGCGCCGCCGGCAGCACCATGGCGCCGCCAGCATCACCTGACCGTG
CAGGCCCTGCTGCTGAGCGGCATCGCAGCAGCACAAACCTGCTGCGCGCCATCGAGGCCAGCAGCACC
TGCTGCAGCTGACCGTGTGGGCATCAAGCAGCTGCAGACCCGATCCTGGCGTGGAGCGTACCTGAAGGACCA
GCAGCTGCTGGCATCTGGGCTGCGAGCGAACATGACCTGGATGCAGTGGACCGCGAGATCAACAACTACACCGACA
AACCGCAGCCACGAGATCTGGACAAACATGACCTGGATGCAGTGGACCGCGAGATCAACAACTACACCGACA
CCATCTACCGCCTGCTGGAGGAGAGCCAGAACCGAGCAGGAGAACGAGAACGGACCTGCTGGCCCTGGACAGCTG
gp140(2025) <-\\/
GCAGAACCTGTGGAACCTGGTCAGCATCACCAACTGGCTGTGGTACATCAAGATCTCATCATGATCGTGGCGGC
CTGATCGGCCCTGCGCATTCTCGCCGTGCTGAGCATCGTGAACCGCGTGCAGGCCAGGGCTACAGCCCCCTGCCCT
TCCAGACCCCTGACCCCCAACCCCCCGCGAGCCGACCGCCTGGCCCTGGCGCATCGAGGAGGAGGGCGGGAGCAGGACCG
CGGCCGCGCATCCGCTGGTGAAGCGGCTTCCCTGGCCCTGGCGTGGAGCGACCTGCGCAGCCTGTGCCCTGTCAGC
TACCAACGCCCTGCGCAGCTTCATCCTGATCGCCGCCCGTGTGGAGCTGCTGGAGCTGGCCAGCGCGGCCAGGGAGGCC
TGAAGTACCTGGGAGCCCTGGTGCAGTACTGGGCGTGGAGCTGAAGAACAGCGCCATCAGCCTGCTGGACACCAT
CGCCATCGCCGTGGCGAGGGCACCGACCGCATCGAGTTCATCCAGCGCATCTGCCGCCATCCGCAACATC
gp160, gp41(2547) <-\\
CCCCGCCGCATCCGCCAGGGCTTCGAGGCCGCCCTGCAGTAA

Fig. 4

Env_AF110975_C_BW_opt

--> **signal peptide (1-72)**

ATGCGCGTGCAGCTGGCAGCTGGCAGCAGTGGTGGATCTGGGATCTGGATCTGCAGCG
gp120/140/160 (72) \/\-\>
GCCTGGCAACCTGTGGGTGACCGTGTACGACGGCGTCCCCGTGGCGAGGCCAGCACCCACCTGTTCTGCGC
CAGCGACGCCAAGGCCAACGAGCTACGAGAAGGAGGTGCACAACGTGTGGGCCACCCACGCCTGCGTCCCACCGACCCAAAC
CCCCAGGAGATCGAGCTGGACAACGTGACCGAGAACTCAACATGTGAAGAACGACATGGTGGACCAGATGCACG
AGGACATCATCAGCCTGTGGGACCAGAGCCTGAAGCCCCGCGTGAAGCTGACCCCTGTGCGTACCCCTGAAGTG
CACCAACTACAGCACCAACTACAGAACACCATGAACGCCACCAGCTACAACAACACCACCGAGGAGATCAAG
AACTGCACCTTCAACATGACCACCGAGCTGCGGACAAGAACAGCAGCAGGTGTACGCCCTGTTCTACAAGCTGGACA
TCGTGCCCTGAACAGAACAGCAGCGAGTACCGCTGATCAACTGCAACACCAGCGCCATCACCCAGGCCCTGCC
CAAGGTGAGCTCGACCCATCCCCATCCACTACTGCGCCCCGCCGGCTACGCCATCCTGAAGTGCAAGAACAAAC
ACCAGCAACGGCACCGGCCCTGCCAGAACGTGAGCACCCTGCAGTGCACCCACGGCATCAAGCCGTGGTGGCA
CCCCCTGCTGCTGAACGGCAGCCTGGCGAGGGCGGAGATCATCATCCGAGCAAGAACCTGAGCAACAAACGC
CTACACCATCATCGTGCACCTGAACGACAGCGTGGAGATCGTGTGCACCCGCCAACAAACAACACCCGCAAGGGC
ATCCGCATGCCCGGCCAGACCTCTACGCCACCGAGAACATCATCGCGACATCCGCCAGGCCACTGCAACA
TCAGCGCCGGAGTGGAAACAAGGCCGTGCAGCGCGAGCAGCTGCCGAGCAGTCCCAACTGCCGCGAGTTCTTAC
CGAGTTCCAGCCCAGCAGCGCGAGCTGGAGATCACCACCCACAGCTTCAACTGCCGCGAGTTCTTAC
TGCAACACCAGCAAGCTGTTCAACAGCAGCTACAACGGCACCAGCTACCGCGGACCGAGAGCAACAGCAGCATCA
TCACCCCTGCCCTGCCGATCAAGCAGATCATGACATGTGGCAGAAGGTGGGCCGCATCTACGCCCTCCAT
CGAGGGCAACATCACCTGCAGCAGCAGCATCACCGCCCTGCTGCTGGCCCGACGGCGGCTGGACAACATCACC
ACCGAGATCTCCGCCCGAGGGCGGAGCATGAAGGACAACCTGGCGAACGAGCTGTACAAGTACAAGTGGTGG
gp120 (1509) <\-\> gp41
AGATCAAGCCCTGGCGTGGCCCCACCGAGGCCAGCGCCGCTGGTGGAGCGAGAACGCCGCGTGGCAT
CGGCCGCGTGTCTGGCTGGCCCGCCGGCAGCAACATGGCGCCGCCAGCATCACCCCTGACCGCCAG
GCCCGCCAGCTGCTGACCGGATCGCAGCAGCAGAGCAACCTGCTGCCGCCATCGAGGCCAGCAGCACATGC
TGCAGCTGACCGTGTGGGCATCAAGCAGCTGCAGGCCCGCTGGCCATCGAGCGTACCTGAAGGACCAGCA
GCTGCTGGCATCTGGCGTGCAGCGCAAGCTGATCTGCACCAACCGTGCCTGGAACAGCAGCTGGAGCAAC
AAGACCCAGGGCGAGATCTGGAGAACATGACCTGGATGCAGTGGACAAGGAGATCAGCAACTACACCGCATTCA
TCTACCGCTGCTGGAGGAGAGCCAGAACAGCAGGAGCAGAAGCAGAGGACCTGCTGGCCCTGGACAGCCCAA
gp140 (2022) <\-\>
CAACCTGTGGAGCTGGTCAACATCAGCAACTGGCTGTGGTACATCAAGATCTTCAATGATCGTGGCGGCTG
ATCGGCCCTGCCGATCATCTCGCCGTGCTGAGCATCGTGAACCGCGTGCAGGCCAGGGCTACAGCCCTGAGCTTCC
AGACCCCTGACCCCAACCCCGCGGCCCTGGACCGCCTGGCCGATCGAGGAGGAGGGCGAGCAGGACCGCGA
CCGCAGCATCCGCTGGTGCAGGGCTTCTGGCCCTGGCCGATCGAGGAGGAGGGCGAGCAGGCCAGGCCCTGC
CACCGCCCTGCCGACCTGATCTGGTACCGCCCGCGTGGAGCTGCTGGCCGAGCAGCCCCCGCGGCCCTGC
AGCGCGCTGGAGGCCCTGAAGTACCTGGCAGCCTGGTGCAGTACTGGGCCCTGGAGCTGAAGAACAGCGCCAC
CAGCCTGCTGGACAGCAGCATGCCATGCCGTGGCGAGGGCACCGACCGCATCATCGAGGTGATCCAGCGCATCTAC
CGGCCCTCTGCAACATCCCCGCCGCGTGCAGGCCAGGGCTTCGAGGCCGCGCAGTAA
gp160, gp41 (2565) <\-\>

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ATGGGCGCCGCCAGCATCCTGCAGGGCAAGCTGGACGCCCTGGAGCGCATCCGCCTGCAGCCCCGG
CGGCAAGAACTGCTACATGATGAAGCACCTGGTGTGGCCAGCCGAGCTGGAGAAGTTGCCCTGAACC
CCGGCCTGCTGGAGACCAGCGAGGGCTGCAAGCAGATCATCCGCCAGCTGCACCCGCCCTGCAGACCGGC
AGCGAGGAGCTGAAGAGCCTGTTAACACCGTGGCCACCCGTACTGCGTGCACGAGAAGATCGAGGT[GCG]
CGACACCAAGGAGGCCCTGGACAAGATCGAGGAGGAGCAGAACAAAGTGCCAGCAGAAGATCCAGCAGGCCG
AGGCCCGACAAGGGCAAGGTGAGCCAGAACTACCCATCGTCAGAACCTGCAGGGCCAGATGGTGCAC
CAGGCCATCAGCCCCCGCACCCGTAAACGCCCTGGTGAAGGTGATCGAGGAGAAGGCCCTCAGCCCCGAGGT
GATCCCCATGTTACCGCCCTGAGCGAGGGGCCACCCCCCAGGACCTGAACACCATGCTGAACACCGTGG
[G] [T] GCGGCCACCAGGCCGCATGCAGATGCTGAAGGACACCATCAACGAGGAGGCCGAGTGGGACCGCGTG
CACCCCGTGCACGCCGGCCCATGCCCGGCCAGATGCGCGAGCCCCGGCAGCGACATGCCGGCAC
CACCAAGCACCCGTCAAGGAGCAGATGCCCTGGATGACCAAGAACCCCCCATCCCCGTGGGACATCTACA
AGCC[G]GGATCATCCTGGCCTGAACAAGATCGTGC[G]ATGTACAGCCCCGTGAGCATCCTGGACATCAAG
CAGGGCCCCAAGGAGCCCTCCGCGACTACGTGGACCGCTTCTCAAGACCCCTGCGCGCCAGCAGAC
CCAGGAGGTGAAGAACTGGATGACCGACACCCGTGGTGCAGAACGCCAACCCGACTGCAAGACCATCC
TGCGCGGCCCTGGCCCCGGGCCAGCCTGGAGGAGATGACCGCCTGCCAGGGGTGGGGCCCCAGC
CACAAAGGCCCGGTGCTGGCCGAGG[C]ATGAGCCAGGCCAACACCAAGCGTATGAGAACAGAACCTT
CAAGGGCCCCCGGCATCG[G]AAAGTGCCTCAACTGCGGCAAGGAGGGCACATGCCCGCAACTGCCCG
CCCCCGCAAGAAGGGCTGCTGGAAGTGCAGGCAAGGAGGGCACCAAGATGAAGGACTGCACCGAGCGCCAG
GCCAACTTCCTGGCAAGATCTGCCAGCCACAAGGGCCGGCAACTTCCTGCAGAGGCCGGCGA
GCCCAACCGCCCCCCCCCGCCGAGAGCTTCCGCTTCGAGGAGACCACCCCGGCCAGAACAGCAGGAGAGCAAGG
ACCGCGAGACCCGTACCAAGCCTGAAGAGCCTGTTGGCAACGACCCCTGAGCCAGTAA

Figure 5

Gag_AF110967_BW

ATGGGCGCCCGCGCCAGCATCCTGCGCGGAGAAGCTGGACAAGTGGGTAGATCCGCCTGCGCCCCGG
CGGCAAGAACGCACTACATGCTGAAGCACCTGGTGTGGGCCAGCCCGAGCTGGAGGGCTTCGCCCTGAACC
CCGGCCTGCTGGAGACCGCCGAGGGCTGCAAGCAGATCATGAAGCAGCTGCAGCCGCCCTGCAGACCGGC
ACCGAGGAGCTGCGCAGCCTGTACAACACCGTGGCCACCCCTGTACTGCGTGCACGCCGGCATCGAGGTCGG
CGACACCAAGGAGGCCCTGGACAAGATCGAGGAGGAGCAGAACAAAGAGCCAGCAGAACAGACCCAGCAGGCCA
AGGAGGCCGACGGCAAGGTGAGCCAGAACTACCCCATCGTCAGAACCTGCAGGGCCAGATGGTGCACCAAG
GCCATCAGCCCCCGCACCCCTGAACGCCCTGGTGAAGGTATCGAGGAGAACGCCCTCAGCCCCGAGGTGAT
CCCCATGTTACCGCCCTGAGCGAGGGGCCACCCCCCAGGACCTGAACACCATGCTGAACACCGTGGCG
GCCACCAGGCCCATGCAGATGCTGAAGGACACCATCAACGAGGAGGCCCGAGTGGACCCTGCAC
CCCGTGCAGGCCGGCCCCGTGGCCOCAGATGCGCGACCCCCCGGCCAGCGACATGCCGGGCCAC
CAGCACCCCTGCAGGAGCAGATGCCCTGGATGACCAGCAACCCCCCGTGGCGACATCTAACAGC
GCTGGATCATCCTGGCCTGAACAAGATCGTGCCTGAGTACAGCCCCGTGAGCATTGGACATCCGCCAG
GGCCCCAAGGAGGCCCTCCGCAACTACGTGGACCGCTTCTTAAGAACCTGCCGCCAGCAGGCCACCCA
GGACGTGAAGAACTGGATGACCGAGACCCCTGCTGGTCAGAACGCCAACCCGACTGCAAGACCATCCTGC
GCGGCTGGCCCCGGGCCACCCCTGGAGGAGATGATGACCGCCTGCCAGGGCGTGGCGGCCAC
AAGGCCCGCTGCTGGCGAGGCGCTGAGCCAGGCCAACAGCGTGAACATCATGATGAGAACAGCAACTT
CAAGGGCCCCCGCAACGTCAAGTGCCTCAACTGCCCAAGGAGGGCACATGCCAAGAACCTGCCCG
CCCCCGCAAGAAGGGCTGCTGGAAGTGCGGCAAGGAGGGCACCAAGATGAAGGACTGCACCGAGGCCAG
GCCAACTTCTGGCAAGATCTGGCCCAGCCACAAGGGGCCCGCAACTTCTGCAGAACCGCAGCGA
GCCCGCCGCCACCGTGCCTGCCACCGGCCCGCGAGAGCTTCCGCTCGAGGAGACCACCCCGCCC
CCAAGCAGGAGCCCAAGGACCGCGAGCCCTACCGCGAGCCCTGACCGCCCTGCCAGCCTGTTGGCAGC
GGCCCCCTGAGCCAGTAA

Figure 6